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HENRY FOX

ENTOMOLOGICAL NEWS

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Henry Fox (1875–1951)

Henry Fox was born February 18, 1875, at Germantown, Philadelphia, the youngest son of William and Elizabeth Ellen (Saylor) Fox. From boyhood two interests were important factors in his life: one, animal life, from which developed not only his professional career, but also the many ramifications of his purely personal investigations; the other, a liking for history, which later served as a "side pursuit," to use his own words in describing this collateral activity. While his earlier chief biological activity was comparative vertebrate morphology, he later (circa 1908) changed to entomology, which thus became, and remained, the chief field of his researches. However, through his life there continued the same broad interest in the animal and plant worlds which had first kindled his enthusiasm; his love of birds and of our native flora, and his concern for the preservation of our wild life, gave him a breadth of mind now all too rare with present-day biologists.

Graduating from historic Germantown Academy in 1895, Fox entered the University of Pennsylvania and received from it successively the degrees of B.S. in Biology in 1899, M.A. in 1903, and Ph.D. in 1905. During these years at the University of Pennsylvania he held in succession a Harrison Scholarship, a University Scholarship, and a Harrison Fellowship. Having completed the required academic courses for the doctor's degree, he continued in absentia work on his research project and dissertation while holding various positions elsewhere. These embraced a laboratory assistantship in Biology at the University of Wisconsin (1902–03), Professor of Chemistry at Temple University (1903–05), and Instructor in

Natural Science at the Northeast High School in Philadelphia (1905–07). Research work in the summer vacations was carried on at the Marine Biological Station at Wood's Hole, Mass. (1901–02), at Harvard Medical School (1905), and at the Biological Station of the Brooklyn Institute of Arts and Sciences at Cold Spring Harbor, New York (1906–07).

My acquaintance with Henry Fox dated from the years of his graduate studentship at the University of Pennsylvania, when he occasionally visited the Academy of Natural Sciences, used its library, and then established friendships with members of the Academy staff which endured through his life, or the lives of those who passed before him.

From 1907 to 1912 Dr. Fox was Professor of Biology at Ursinus College, Collegeville, Pennsylvania, at the same time teaching general biology at Temple, in the Summer School of the University of Pennsylvania, or the Medico-Chirurgical College in Philadelphia, the latter now merged with the Medical School of the University of Pennsylvania, as well as summer class work in economic entomology at the Ambler, Pennsylvania, Agricultural School for Women. During this period he worked for some time at the University of Pennsylvania Medical School in conjunction with Dr. Leo Loeb on an investigation of the poison glands of the Gila Monster (*Heloderma suspectum*), the results of which were published in 1913 by the Carnegie Institution of Washington.

In 1908 his interests, which previously had been chiefly in the field of vertebrate anatomy and embryology, began to concentrate upon insects; in that year while on summer vacation in southern New Jersey he gave increasing attention to the tiger beetles (Cicindelidae) and the long- and short-horned grasshoppers (Orthoptera) of that area, their distribution, ecology, and specific adaptability. From this work came his first two entomological publications, one on the Cicindelidae of northern Cape May County, the other describing two new species of long-horned meadow grasshoppers (of the genus *Conocephalus* as now understood) from the salt marsh areas of coastal New Jersey. A corollary of this work was the rediscovery, near the now abandoned railroad station of Swain,

of the Southern Yellow Orchid (*Gymnadeniopsis integra*), a species which had not been found in New Jersey for many years, although described from that state by Nuttall in 1818. The remainder of Dr. Fox's active life and researches, when teaching duties permitted, was largely devoted to insect investigations of various types, both in the field and in the laboratory.

The years from 1912 to 1918 were devoted to field insect investigations for the Bureau of Entomology, first at Lafayette, Indiana (1912–13), next at Charlottesville, Virginia (1913–16), and last at Clarksville, Tennessee (1916–18). These covered a variety of problems, such as the severe and widely spread outbreak of Army-worm (*Leucania unipuncta*) in Virginia in 1914–15; and in the same state, studies on the Rough-headed Cornstalk Beetle (*Eutheola nigriceps*), a serious corn pest, the life-history of which was then first made known; and in 1916–18, an investigation of the factors responsible for the spread of the mosaic disease of the tobacco plant.

In 1918 Dr. Fox accepted the appointment as Professor of Biology at Mercer University, Macon, Georgia, in which teaching activity he remained until 1925. Knowing Mercer was a sectarian institution, when he accepted his appointment, Dr. Fox made particular inquiry as to whether full academic freedom in the teaching of his subject—Biology—would be guaranteed, and received the personal assurance of the President that such was the policy of the University. However, the Fundamentalist campaign, particularly in the South and chiefly in denominational educational establishments, was steadily growing in strength during the years Dr. Fox was attached to Mercer. In spite of the efforts of the President of the University and a number of the members of the University's Board of Trustees, the situation became so acute, and pressure from non-educational sources became so strong—with biology logically selected as the "whipping boy"—that a committee of the Trustees reported that Dr. Fox's expressed views (being those of any broadly trained biologist) were utterly at variance with those held by the general run of Georgia Baptists. Despite the efforts of the President of the University and of the more

moderate members of the Board of Trustees to sustain Dr. Fox's personal rights for religious freedom, and his academic right to teach biology as presented elsewhere, extreme members of the Board threatened to close the University unless Dr. Fox resigned or was dismissed. Maintaining the assurance of freedom of thought and liberty in teaching matters given him when he assumed his post in 1918, Dr. Fox declined to resign. The President, who later himself resigned, did not comply with the Board's instructions to dismiss Dr. Fox, and the latter remained officially in possession of his Mercer post until early in 1925, when he accepted that of Associate Entomologist at the Japanese Beetle Laboratory of the U. S. Bureau of Entomology, first at Riverton, New Jersey, and later at Moorestown in the same state. During each summer of the years he was attached to Mercer University Dr. Fox had served as a field investigator for the Bureau of Entomology, tracing the steady spread of the Japanese beetle (*Popillia japonica*) from its original point of introduction in this country at Riverton, New Jersey, to various other localities in the states of New Jersey, Pennsylvania, Delaware, and Maryland.

While in Georgia Dr. Fox took active part in the formation of two state scientific societies, one the Georgia Academy of Sciences formed in 1922, of which he was Secretary-Treasurer until he left the state in 1925, and the other the Georgia Society of Naturalists formed in 1921, of which he served as President through 1923. During the same years he continued and elaborated his favorite studies on eastern North American grasshoppers, adding greatly to our knowledge of their distribution in Georgia and adjacent states, as well as discovering a new species, named in his honor *Melanoplus foxi* by the late Morgan Hebard.

From 1925 to 1935 Dr. Fox's work at the Japanese Beetle Laboratory covered a wide variety of subjects relating to that important insect. These ranged from the spread and establishment of the beetle, to its climatic adaptability, the fluctuations in its abundance from year to year, and the nature and influence of disease and other natural agencies as possible means for eventual contr[illegible].

On his final retirement from government service in 1935 Dr. Fox established his residence at Ocean View, in Cape May County, New Jersey, in a region where he had spent much of his younger years in field studies, and the biota of which had always held a particular spot in his affections. However, the greater part of nearly every year from 1935 to 1943 he passed in New York City, serving as an emergency instructor in Biology at New York University, continuing during these times studies on the local Orthoptera and also on his long-time subject the Japanese Beetle. In 1943 he completely retired from teaching work, and except for a World War II emergency instructorship in science at the nearby Woodbine, New Jersey, High School, the remainder of his life was spent almost entirely at his Ocean View home, not, however, in placid retirement but largely in personal investigations of local biotic matters of interest to him. Through the adjacent country he was known as one to consult on insect identifications, bird study, local plant life, wild life conservation, and the many other types of queries which come to one of his interests and background. He often acted as the leader or guide on field trips in parts of Cape May County sponsored by several of the nature study organizations found within the county in recent years.

In 1906 Dr. Fox married Adelaide Townsend Godfrey, of Ocean View, daughter of Jesse S. and Emily C. (Van Gilder) Godfrey. Mrs. Fox pre-deceased her husband by a few months. One daughter, Emily Elizabeth, is now the wife of Dr. George Alfred Clark, Assistant Professor of Philosophy at Lafayette College, Easton, Pennsylvania, to whom I am indebted for the loan of a biographical manuscript prepared by Dr. Fox a few years past.

My last letter from Dr. Fox was written in October, 1951, and in it he mentioned that he continued to make short trips, often on his bicycle, but that he had found it necessary to limit them to lesser distances than in former years. His death occurred on November 5, 1951, at the Bendette Tomlin Hospital in Cape May Court House.

Henry Fox published thirty-one original contributions, one dealing with plants, three with aspects of vertebrate morphology

and toxicology, the remainder on insects, with fifteen of the total dealing entirely with the Orthoptera, which for much of his life were his greatest interest. Of the latter papers five were of particular interest, as they supplied either the original descriptions of the two new and interesting meadow grasshoppers (*Conocephalus*) from the salt marshes of New Jersey, or assembled important summaries of Orthopteran faunistics for localities or areas which he knew well. The four of the latter category were: "Data on the Orthopteran Faunistics of Eastern Pennsylvania and Southern New Jersey," published in 1914 in the Proceedings of the Academy of Natural Sciences of Philadelphia; "Notes on Orthoptera and Orthopteran Habitats in the Vicinity of Lafayette, Indiana," published in 1915 in the Proceedings of the Indiana Academy of Sciences; "Field Notes on Virginia Orthoptera," issued in 1917 in the Proceedings of the U. S. National Museum, and "A Revised Annotated List of the Dermaptera and Orthoptera of New Jersey," issued in 1928 as Circular no. 138 of the New Jersey Department of Agriculture.

Dr. Fox's membership in the Academy of Natural Sciences of Philadelphia dated back to October, 1901, and he was elected a member of the American Entomological Society in April, 1926. These relationships were maintained through the remainder of his life. In addition to membership in a number of societies of more local character, and in others of national scope in his more active professional years, he was a member of the American Association for the Advancement of Science.

In all aspects of his life Henry Fox was the traditional scholar, quiet, painstaking with details, careful in his analysis of the work of others, observant, tolerant, and with, deep-seated, the traditional American regard for freedom of thought and belief. From a friendship of fifty years, from many contacts due to our common interest in the Orthoptera and problems connected with these insects, there emerges the picture of a kindly, gentle, brilliant and thoughtful man, in whom the love of nature was deep and abiding, together with the belief there was always something new to be learned from the woods or

fields. In the last years of his life his occasional visits to Philadelphia always brightened one's day, as with him came some new experience or some observation accumulated in the months between, or a revival of some incident in one's years past which in memory turned back the clock.

JAMES A. G. REHN

Oeneis oslari Skinner, Rediscovered (Lepid.: Nymphalidae)

BY F. MARTIN BROWN, Fountain Valley School, Colorado Springs, Colorado

For fifteen or more years Mr. Cyril F. DosPassos has been urging me to find for him *Oeneis oslari* Skinner. Dr. Skinner described the species, now considered a race of *daura* Strecker, on the basis of two pairs collected by the late Mr. Ernest Oslar of Denver. The type was taken in the early fall at the head of Deer Creek Canyon. I discussed this capture with Mr. Oslar before he died and learned that it was made above the canyon head at about 9,600 feet elevation. Of the dozen or more Deer Creeks in Colorado the one involved is that just south of Morrison in Jefferson County. This is Front Range country, an area that entomologically I know rather well. For years I have searched it for *oslari* without success.

This spring Dr. Walfred Reinthal of Norman, Oklahoma, brought to me a series of *Oeneis* that he had collected on the western slope of the Continental Divide in July around Gothic, Colorado. Most of these were cleary *uhleri* Edwards. A number of them were unusual in that there was a very well developed median band on the underside of the hindwings. I remembered that the Rev. Bernard Rotger, now of Pagosa Springs, Colorado, had mentioned some time ago that he had what he believed to be two *oslari* taken very early in the year. I asked the Padre to lend me his *oslari* and Mr. DosPassos to lend me his photographs of the type of *oslari* to compare with Dr. Rein-

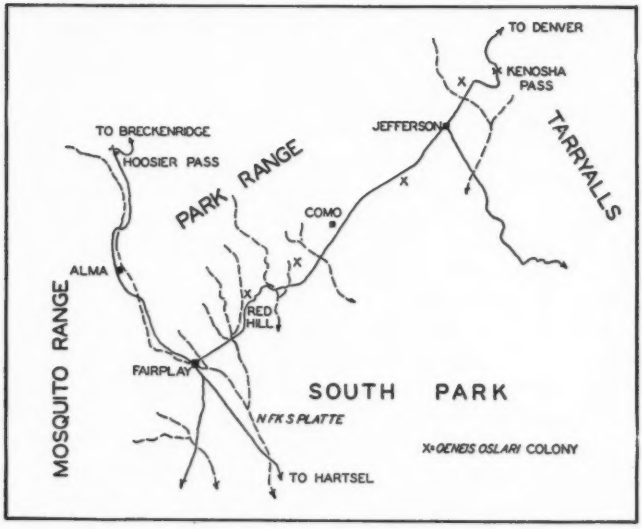
thal's material. My hunch did not pay off. The odd, banded *uhleri* were not *oslari.*

While Parde Bernard was visiting me early this June we discussed his capture of *oslari.* He told me that he had taken the species on two occasions ten years apart very early in the spring near Fairplay, Colorado. He described the locality so well that three days later, after an early morning drive of a hundred miles, Dr. Richard Fox, his son and daughter, and I found it and by nine o'clock had made a capture. By noon the four of us had taken about twenty-five *oslari,* both males and females. That afternoon I introduced the Fox family to Bruce's classical collecting grounds at Hall Valley where they collected the next day, while I returned to South Park to learn what I could about the habits and range of the *Oeneis.*

All together I spent three and a half days combing the South Park area for *oslari.* In that time I located four colonies. It is perfectly obvious now why none of us looking for butterflies has run upon the species before. It is only due to Padre Bernard's wide interest in insects that the true situation was discovered. He found the first specimens while looking for beetles! *Oeneis oslari* shares with *Boloria freija* subspecies the distinction of being the first of the mountain butterflies to be on the wing. Unlike *freija* its period of flight must be very short and its altitudinal range very narrow. The figured map shows the locations of the four stations where I collected the insect. Doubtlessly future years will expand the number of stations.

Those who search for the species may profit from what I learned. First, although I searched in the foothills of the Mosquito, Park and Tarryall ranges, I found the species only in the Park Range that forms the northern boundary of South Park. There are several areas in the Mosquito Range where it very well may fly but on the basis of vegetation I believe I was a little late for the species (June 11–14). I found no place in the Tarryalls that fits my present concept of the ecological niche occupied by *oslari.* Second, the insect flies just as the aspen (*Populus tremuloides*) is leafing-out. At no place where the

leaves were more than a half inch wide did I find it, nor did I find it where the leaf buds had not broken. A second temporal clue may be found in the wild iris (*Iris missouriensis*). Wherever *oslari* was flying the iris was budded but the buds were still tight, approximately a week or ten days from blooming. A grass that I could recognize but not name was present wherever



I found the beast and absent in most of the localities where I did not find it. This may well be the food-plant. Third, the moisture requirements seem to be quite limited. The species flies only on the semi-arid grass-lands that are found on the slopes of the low hills in the Park. There must be enough moisture to allow aspen, iris and shrubby cinquefoil (*Dasyphora fruticosa*) to grow yet the area must be dry enough to allow a good stand of white sage (*Artemisia scopulorum*). Fourth, there seems to be a very definite soil preference, probably directly related to the food-plant grass. At each of the productive stations the soil is derived from sedimentary rocks, either the

Denver Formation (Tertiary), the Pierre Shale (Cretaceous) or Maroon Formation (Permian). While there were unproductive stations on the sediments (eight out of twelve), all twenty stations located on soils derived from crystalline rocks or the glacial tills, Wisconsin (?), were unproductive. A station was presumed to be unproductive if in twenty minutes I had not stirred up a specimen of *oslari*.

The behavior of the beast is not too helpful for the collector! It rarely flies unless disturbed. On our first day of collecting (June 11) I thought this quite likely due to the fact that we were working during intermittent snow squalls. The sun rarely shone brightly for more than ten or fifteen minutes and the temperature seemed not much above freezing. Only the upper few inches of the soil had thawed. Ranchers in the neighborhood told me that the snow had been off the ground about three weeks. No one in his right mind would have looked for butterflies that day! On the following day the forenoon was brilliantly clear. Still the butterflies did not rise and fly unless I approached too close. In fact the only way I could locate one was by walking endlessly through the grass and flushing each specimen. It then flew ten or twenty feet and settled. This flight, like that of many of the related *Oeneis* and *Eumenis ridingsi* Edwards, is more like that of a Noctuid than that of a butterfly. It is often an erratic spiral progress rarely higher than two feet from the ground. Usually the beast does not get enough altitude to allow a good stroke of the net! When the animal alights, it disappears, so good is its camouflage. The striated black and white underside blends perfectly with the dry gray straws of grass, the lichens, the sage, and the year-old cow chips. It vanishes when it alights on the latter and leans over to expose the entire underside of the wings. Fully half of the specimens captured refused to rise as a net was dropped over them and one had to dig around beneath it to capture the specimen.

The very early emergence of this species, fully a fortnight before any other *Oeneis* would think of flying, suggests that it passes the winter as a pupa. There is just not time enough in the short period from the disappearance of snow to the appearance of the butterfly to allow a last instar larva to finish-off,

pupate and transform. If this is so, and I can see no other explanation, then an occasional individual, favorably placed, may emerge in the fall as a rare "second brood." Four of these fell to Mr. Oslar and became the types of the race that bears his name.

A New Subspecies of Otocryptops gracilis (Wood) from the Eastern United States, together with Remarks on the Status of Otocryptops nigridius (McNeill) and a Key to the Species of the Genus now Known to Occur East of the Rocky Mountains (Chilopoda: Scolopendromorpha: Cryptopidae)

By Ralph E. Crabill, Jr., Department of Entomology, Cornell University

That *Otocryptops* is one of the most primitive genera of the Scolopendromorpha is abundantly evident, not only from its obvious structural proximity to the fundamental *Cryptops*-form but also from the characteristic distributional discontinuities evident in most of its component species. It is no longer surprising, therefore, to discover the same species in widely separated regions of the globe, particularly in North America and eastern Asia, two regions which show numerous other faunal as well as floral similarities. Thus, *sexspinosus, rubiginosus,* and *melanostomus* are known from the the New World, the first two from Alaska and all three from eastern Asia, a characteristic pattern of dispersal.

In contrast to this pattern, the American *gracilis*[1] had been recorded from no area other than California until in 1943 Chamberlin reported its presence in Houston, Texas.[2] With the recognition of a new subspecies on the eastern coast of this continent, the species may be seen to approximate more closely the distributional discontinuities encountered in other members of the genus.

[1] Wood: Journ. Acad. Nat. Sci. Phila., ser. 2, V, p. 38 (1862).
[2] Chamberlin: Proc. Biol. Soc. Wash., LVI, p. 97 (1943).

Considering the distributional pattern of *gracilis,* as we now know it, one may hazard the guess that the species was once distributed widely across the area now comprising the United States in preglacial times and that the various glaciations destroyed the intervening populations, leaving *at least* three relict communities, one in California, and one on the Gulf coastal plain perhaps cut off by the long glacial fingers that accompanied the Sierra Nevada mountains for practically their entire length, and one on the lower eastern elevations of the Appalachians.

It is possible that there is still a *gracilis* population continuum between Texas and California and that the forms of both areas are consubspecific. At any rate there is little doubt in my mind but that the new eastern subspecies has long been effectively isolated from the more western populations, probably by the recurrent glaciations.

I should like to express my gratitude to Dr. Joseph Bequaert of the Museum of Comparative Zoology at Harvard University for his kindness in lending me the paratype of the new subspecies as well as specimens of the nominate subspecies; to Mr. Richard L. Hoffman of Clifton Forge, Virginia, in particular for the gift of the type, and in general for his constant consideration in enriching my collection with southeastern centipedes; and also to the many assiduous collectors who have contributed their time and efforts so generously on my behalf.

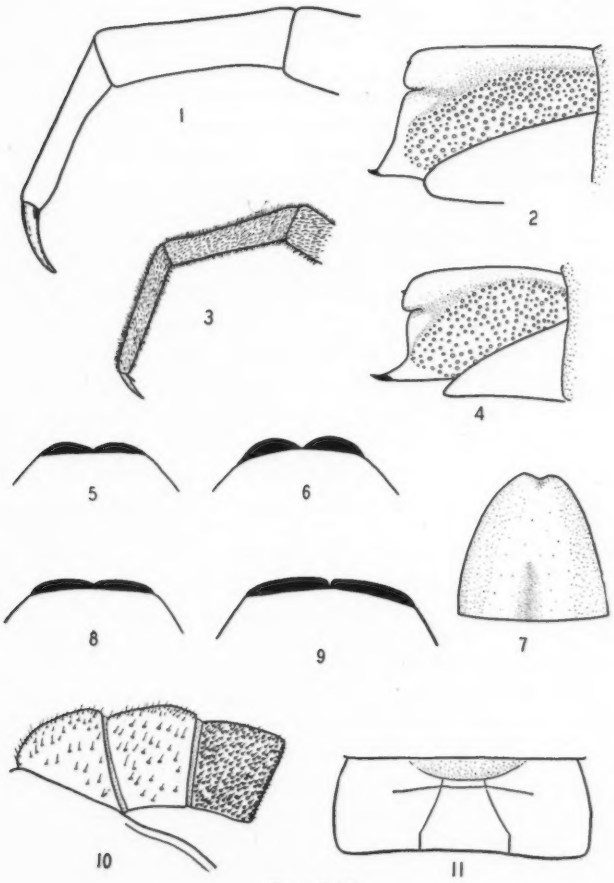
Otocryptops gracilis peregrinator new subspecies

The absence of longitudinal paramedian sulci on the second tergite, and the hirsute ultimate prefemur of the eastern *peregrinator* will serve to differentiate it from the Californian nominate subspecies of *gracilis.*

Type—♀; Charlottesville, VIRGINIA. March 9, 1949. (R. L. Hoffman.) [Author's collection, C–324.]

*Female. L*ength 40 mm. The new subspecies differs from the nominate geographic race in the following features:

General body color light orange-yellow. Second tergite entirely without complete longitudinal paramedian sulci (*cf. gracilis,* fig. 11); third tergite with paramedian sulci incomplete,



FIGS. 1–11

1. *Otocryptops sexspinosus;* ultimate leg tarsal segments. 2. *O. g. gracilis;* right coxopleuron. 3. *O. nigridius;* ultimate leg tarsal segments. 4. *O. g. peregrinator;* right coxopleuron. 5. *O. g. peregrinator;* prosternum. 6. *O. g. gracilis;* prosternum. 7. *O. nigridius;* twenty-third sternite. 8. *O. sexspinosus;* prosternum. 9. *O. nigridius;* prosternum. 10. *O. nigridius;* proximal antennal articles. 11. *O. g. gracilis;* second tergite.

All figures drawn from females. Localities: figs. 1, 3, 7, 8, 9, 10, Sevier County, Tennessee; figs. 2, 6, 11, Santa Cruz, California.

these extending anteriorly from the posterior margin for only one-half the length of the tergite. Distinct lateral tergital marginations beginning on tergite seven (or six), the marginations being generally less distinct than those of the nominate subspecies. Prosternal anterior thickened border thinner than that of the nomniate form (figs. 5, 6). Two apical tibial spines on legs one through nineteen, one on legs twenty and twenty-one, none on the penultimate and ultimate legs; ventral tarsal spines only on legs one through twenty-one. Coxopleural process distinctly longer than that of the nominate form (figs. 2, 4). Pilosity of ultimate leg evident on femur, tibia and tarsus as in the nominate form, but in addition the prefemur densely hirsute, less so dorsally, more so laterally and ventrally, the ventral pilosity extending proximally to the level of the ventral spinous process.

Paratype—♀; Woodside, MARYLAND. (J. E. Benedict.) [In collection of the Museum of Comparative Zoology at Harvard University.]

Female. Length 40 mm. Differing from the type is no important respects. General color very dark due to the obvious age of the specimen. Ultimate legs missing.

Otocryptops nigridius (McNeill) [3]

In his celebrated monograph of the Scolopendromorpha [4] Kraepelin questioned the validity of McNeill's species, suggesting that it was a synonym of *sexspinosus* (Say).[5] In 1930 [6] Attems, unable to include the species in the roster of known North American forms due to its insufficient description, suggested tentatively that it was a synonym of Say's species. Considering the paucity of material in museums generally and the very inadequate original description, it is not surprising that these two astute workers were perplexed.

Relative to their mutual lack of paramedian tergital sulci and their mutual possession of lateral cephalic margins as well as a

[3] MCNEILL: Proc. U. S. Nat. Mus., X, p. 333 (1887).
[4] KRAEPELIN: Mt. Mus. Hamburg, XX, p. 72 (1902).
[5] SAY: Journ. Acad. Nat. Sci. Phila., II, p. 112 (1821).
[6] ATTEMS: Das Tierreich, lief. 54, p. 260 (1930).

host of other significant morphological features, it is clear that *nigridius* and *sexspinosus* are more closely related to each other than either is to any other species of the genus. So wide is the latitude of intraspecific variation in all members of the genus in general and in *nigridius* and *sexspinosus* in particular that, lacking a sufficient series to study, it is quite logical to suppose the former to be perhaps a color variant of the latter. However, despite the magnitude of variation in either one of these species in any one locality, it is possible to cite several constant morphological differences that will adequately distinguish one from the other.[7] That *nigridius* is a subspecies or even a genetical anomoly of *sexspinosus* seems to be excluded by the following considerations relative to the geographical distribution of each:

1. If the smaller, darker *nirgridius* were a genetical chance aberration, we could expect it to appear throughout the range of *sexspinosus* but such is not the case for the latter is widespread especially throughout temperate North America, whereas *nigridus* is known to occur only in the midwest (Indiana) and in the unglaciated regions of the Appalachians and their immediate environs. Consequently since the two forms are not everywhere sympatric, it would seem that the possibility of McNeill's species' being a genetical chance anomaly of *sexspinosus* is ruled out.

2. If the two forms were subspecies, we should not expect them both to inhabit the same locality, or if they did, we should expect to discover morphological intergradations between them, but such intergradations are not apparent for I have good series of both forms from Tuscaloosa, Alabama; Clemson, South Carolina; Highlands, North Carolina; and Sevier County, Tennessee, none of which shows any overlap, even though in each case all of the material was taken on the same day, at the same elevation and even in the same immediate area.

The smaller, darker bluish-green tinged *nigridius* may be most easily distinguished from the larger, lighter orange-red *sexspinosus* not only by its general color habitus but also by the aggregations of bluish or purplish tiny blotches that pepper the

[7] Within certain limits color, body length, ultimate leg length and the shape and proportions of the ultimate pedal sternite undergo a striking degree of variation in the same sex and *in the same locality.*

former species, these blotches being especially striking on the otherwise immaculate white ventral leg areas. Other features characteristic of *nigridius* that will differentiate it from *sexspinosus* are the following:

In any locality the *average* size of *nigridius* is less than that of *sexspinosus*. The first and second antennal articles are sparsely hirsute as contrasted with the densely hirsute third article, whereas in *sexspinosus* only the first antennal article is sparsely hirsute (fig. 10). (Next to color this character is the most constant; I have not observed it to vary in any specimen in the East.) Anterior prosternal margin straighter in *nigridius* (cf. figs. 8, 9). Very shallow but distinct longitudinal excavations usually present on some of the mid-body tergites, a shallow median excavation often present on the proximal third of the ultimate pedal sternite (fig. 7). The supracoxal pleural sclerites tend to be more numerous, segment ten frequently with four substigmatal sclerites, whereas specimens of *sexspinosus* from the same locality (Sevier County, Tennessee) show but a single substigmatal sclerite. Ultimate legs of both sexes densely or subdensely pilose,[8] the prefemur glabrous, whereas the entire ultimate leg of either sex of *sexspinosus* is glabrous except for an occasional solitary seta in rare cases (figs. 1, 2).

Besides those mentioned above, I have examined many specimens of *nigridius* from the following localities: Virginia, Stoney Point; Charlottesville; Botetourt County; Grayson County; Pittsylvania County; Rockingham County. Alabama, Fayette. Kentucky, Magoffin County. South Carolina, Florence.

Otocryptops sexspinosus (Say)

An examination of specimens ranging from northern Florida up the Appalachians and the Atlantic coastal plain shows them

[8] It seems impossible to correlate sex with any external morphological feature in *Otocryptops* in one hundred per cent of the cases. Although it is true that in any one locality there is an apparent tendency for the male ultimate leg to be shorter and more robust (and more densely hirsute in the case of *nigridius*) than that of the female, it is also true that a certain percentage of the males will not conform to these rules. So far as I know, the examination of the concealed genito-anal segments remains the only sure method of determining sex in the genus.

to be apparently conspecific, the variations being in size and relative proportions as is usual in the genus. The southern specimens average considerably larger in size due to the longer growing season.

Otocryptops rubiginosus (Koch)

At present unknown from either the eastern or western United States, this species is apparently common in the midwest and in Alaska. I have examined specimens from the following localities: Nebraska, Barada; Rulo; Barnston. Kansas, Geary County; Pottawatomie County; Riley County. Illinois, Rock Island; Galesburg. Iowa, Boonesboro (sic); Davenport. Attems also reports the species from Minnesota.[9]

Key to the Species of *Otocryptops* Now Known to Occur East of the Rocky Mountains

1a. No tergite with complete longitudinal paramedian sulci...2
1b. Complete longitudinal paramedian sulci beginning on tergite two, three, or four.....3
2a. First antennal article sparsely hirsute and contrasting markedly with second densely hirsute article; general body color orange shading to dark orange-reddish, no blue or purplish splotches present anywhere on body, ventral leg areas immaculate white.....*sexpinosus* (Say)
2b. First and second antennal articles sparsely hirsute and contrasting markedly with the densely hirsute third article; general body color very dark, sordid red suffused with a greenish hue, all parts of the body with very distinct localized aggregations of tiny bluish or purplish splotches, the ventral leg areas always distinctly peppered with tiny bluish or purplish splotches, never immaculate white.....
.....*nigridius* (McNeill)
3a Cephalic plate with a well-defined lateral margin; sternites entirely without median longitudinal sulci.....
.....*rubiginosus* (Koch)
3b Cephalic plate without a lateral margin; sternites with well-defined median longitudinal sulci; second tergite entirely without complete sulci, third tergital sulci incomplete anteriorly; ultimate leg prefemur densely hirsute.....
.....*gracilis peregrinator* new subspecies

[9] Attems: loc. cit.

Nabis ferus L. (Hemiptera: Nabidae) Biting a Human

By W. W. JUDD, Department of Zoology, University of Western Ontario, London, Ontario

On Sept. 27, 1950 a woman in London, Ontario, reported feeling a sensation "like a bee sting" on the upper right region of the chest. When removed from the clothing, the insect that caused the bite proved to be a macropterous specimen of *Nabis ferus* L. as identified by keys in Blatchley (1926) and Britton (1923). The affected area of the skin was a circular, pink, inflamed patch about one-half inch in diameter encompassing three red puncture holes raised up on papillae the size of pinheads. Two days later, Sept. 29, the inflamed area had faded while the marks of the three bites remained.

Blatchley (1926) refers to the predaceous habits of the bugs of the family Nabidae, pointing out that they feed upon plant lice and soft-bodied larvae, and Matheson (1950) reports that *Nabis capsiformis* Germar, a species which is cosmopolitan in the tropics, is known to attack humans. Knowlton (1950) records that three species of *Nabis,* including *N. ferus,* were seen feeding on insects and Roberts and Knowlton (1951) report that *Nabis alternatus* (Parshley) bit humans at Logan, Utah.

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Notes and News in Entomology

Under this heading we present, from time to time, notes, news, and comments. Contributions from readers are earnestly solicited and will be acknowledged when used.

Entomologists and Simplified Spelling

Professor Samuel S. Haldeman during his lifetime (1812–1880) had many different intellectual interests. In addition to his descriptions of new species of Coleoptera, his published papers included titles on shells, spiders, crustaceans, annelides, geology, chemistry, archaeology and various miscellaneous subjects such as the smelting of iron, literary criticism, school readers, poetry, etc. He was, in addition, deeply interested in philology and wrote more papers on this subject than on the other subjects of his interest. He helped to found the American Philological Association and was its first vice-president, 1874–1876, and its president, 1876–1877.

In Philadelphia at the Atlas Hotel, August 14–17, 1876, there was held an International Convention of the American Philological Association over which Professor Haldeman presided and at which he gave an eloquent address on the importance of spelling reform. On the fourth day of the convention the Spelling Reform Association was organized with Haldeman as one of its vice-presidents. At the annual meeting of the Spelling Reform Association in Baltimore in 1877 there was adopted a phonetic alphabet devised in part by Haldeman. In "The Plowshare" for 1877, a little magazine published in New York City and devoted to the promotion of spelling reform, there are twenty-two suggested alphabets and modes of spellings including two credited to S. S. Haldeman whose proposed alphabets included not only phonetic spellings but new characters as well.

Another entomologist and exponent of simplified spelling, but so far as I know, not a deviser of new alphabets, was Major Ronald Ross, F.R.S., C.B., professor of tropical medicine at the University of Liverpool, and responsible for the

greatest discovery in the history of malaria, for which he was honored by two Nobel prizes. While stationed in India he demonstrated the part played by mosquitoes in the transmission of malaria, which discoveries were published 1897–1899. Dr. C. W. Larison, a physician of Ringoes, New Jersey, founded the "Jurnal ov Orthoepi & Orthografi" in January 1885, and continued to edit and publish this magazine for twenty-six years. It was devoted to simplified spelling and printed with phonic types. As time went on the types, which had to be cast on order, became worn and various persons contributed cash so that new types could be purchased. One of these contributors was Major Ross who in 1904 sent Dr. Larison two guineas ($10.20) for the type fund.—H. B. Weiss.

Nomenclature Notice

At the Congress to be held at Copenhagen in 1953, certain proposed amplifications, clarifications and extensions to the International Code of Zoological Nomenclature are to be considered. The secretary, Mr. Hemming, must prepare comprehensive reports on the problems involved and wishes to elicit expressions of opinion from interested specialists. The issues involved in each case as well as preliminary suggestions have been set forth by Mr. Hemming in papers published in the *Bull. of Zool. Nomenclature,* Vol. 7. The subjects dealt with are as follows:

1) Emendation of zoological names: proposed substitution for Article 19 of simple, clear-cut rules (Commission's Reference Z.N.(S.) 356).

2) Clarification and amplification of the rules relating to the naming of families and lower categories of suprageneric rank (Z.N.(S.) 357).

3) Proposed introduction of rules for regulating the naming of Orders and higher categories (Z.N.(S.) 360).

4) Species to be accepted as the type species of a nominal genus, the name of which was published in a generic synonymy, if names so published are to be treated as possessing nomenclatorial availability (Z.N.(S.) 387).

5) Application to be given to a trivial name which, when first published, was applied to a particular species or specimen but

which is stated also to be a substitute name for some previously published name (Z.N.(S.) 361).

6) Neotypes: question whether this class of type specimen should be officially recognized and, if so, under what conditions (Z.N.(S.) 358).

7) The means to be devised for securing stability in zoological nomenclature (Z.N.(S.) 359).

It is hoped that museums, other institutions, and many individual scientists will furnish answers to the questions specifically asked in the concluding paragraph of each of the seven papers enumerated above regarding the action that is thought desirable. Of those who are thus willing to give their assistance and advice it is asked that they will observe the following procedure: If comments are furnished on more than one problem they should be on separate sheets of paper. Each comment should be clearly marked with the commission's Reference Number as indicated in the list. Comments should be typewritten on one side of the paper, with wide margins, and furnished in duplicate. Comments should be mailed to Mr. Francis Hemmin, 28 Park Village East, Regent's Park, London, N.W.1., England, and should reach him not later than July 31, 1952.

Current Entomological Literature

COMPILED BY R. G. SCHMIEDER AND J. W. H. REHN

Under the above head it is intended to note papers received at the Academy of Natural Sciences of Philadelphia and the University of Pennsylvania, pertaining to the Entomology of the Americas (North and South), including Arachnida and Myriopoda. Articles irrelevant to American entomology will not be noted; but contributions to anatomy, physiology and embryology of insects, however, whether relating to American or exotic species will be recorded.

This list gives references of the year 1952 unless otherwise noted. Continued papers, with few exceptions, are recorded only at their first installment.

For other records of general literature and for economic literature, see the Bibliography of Agriculture, Washington, and the Review of Applied Entomology, Series A, London. For records of papers on medical entomology see Review of Applied Entomology, Series B.

NOTE: The figures within brackets [ ] refer to the journal in which the paper appeared, as numbered in the List of periodicals and serials published in our January and June issues. The number of the volume, and in some cases, the part, heft, &c. is followed by a colon (:). References to papers containing new forms or names not so stated in titles are followed by (*); if containing keys are followed by (k); papers pertaining exclusively to Neotropical species, and not so indicated in the title, have the symbol (S).

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GENERAL—Graham, A. R.—A slide heater for clearing minute insect specimens. [23] 84: 61–63. **Riley, H. P.**—Ecological barriers. [3] 86: 23–32. **Ross, H. H.**—Facets of insect surveys. [23] 84: 55–59. **Thompson, W. R.**—The philosophical foundations of systematics. [23] 84: 1–16. **Weiss, H. B.**—William Procter, 1872–1951. [45] 59: 217–19, 1951.

ANATOMY, PHYSIOLOGY, MEDICAL — **Andrewartha, H. G.**—Diapause in relation to the ecology of insects. [Biol. Reviews] 27: 50–107. **Anon.**—Influence of antibiotics on the growth of silkworms. [Current Science, India] 20: 313, 1951. **Burnett, T.**—Effects of temperature and host density on the rate of increase of an insect parasite. [3] 85: 337–52 (Hym., Chalcid. and Tenthred.), 1951. **Cook, P. M.**—Observations on giant fibers of the nervous system of Locusta migratoria. [74] 92: 297–305, ill., 1951. **Cooper, M. I. and G. Fraenkel**—Nutritive requirements of the small eyed flour beetle Palorus ratzeburgi Wissman (Tenebr.). [Physiol. Zool.] 25: 20–28. **Durand, M. C.**—Sensibilité de la chromatine aux hydrolyses acides et enzymatiques dans la spermatogenese de Gryllus bimaculatus. [Bull. Biol. Fr. Belg.] 85: 419–21, 1951. **Fernando, H. E.**—The anatomy and histology of the alimentary canal of a myrmelionid larvae. [Ceylon Jour. Sci., B] 24: 27–45, ill., 1951. **Fernando, W.**—Notes on the alimentary canal and malpighian tubules of the firefly (Luciola mauretanica). [Ceylon Jour. Sci., B] 24: 49–59, ill., 1951. **Fisk, F. W. and G. F. Shambaugh**—Protease activity in adult Aedes aegypti mosquitoes as related to feeding. [58] 52: 80–88. **Gregerman, R. I. and G. Wald**—The alleged occurrence of adrenalin in the mealworm. [J. Gen. Physiol.] 35: 489–93, 1951. **Hausman, S. A.**—The scent-producing organ of the male monarch butterfly. [3] 85: 389–91, ill., 1951. **Hoyle, G.**—High blood potassium in insects in relation to nerve conduction. [53] 169: 181–82. **Jenni, W.**—Beitrag zur Morphologie und Biologie der Cynipide Pseudocoila bochei Weld, eines Larvenparasiten von Drosophila melanogaster Meig. [Acta Zoologica] 32: 177–254, ill., 1951. **Le Gare and Hovanits**—Population studies. (See under Lepidoptera.) **Levitan, M.**—Selective differences between males and females in Drosophila robusta. [3] 85: 385–88, 1951. **Lühmann, M. und O. Drees**—Ueber die Temperaturabhängigkeit der Atmung sommerschlafender Blattkäfer. [Zool. Anz.] 148: 13–22. **Mainx, F.**—Die Verbreitung von Chromosomendislokationen in natürlichen Populationen von Liriomyza urophorina (Dipt., Agromy.). [Chromosoma] 4: 521–34, ill., 1951. **Petit, C.**—Le role de l'isolement sexuel dans l'évolution des populations de Drosophila melanogaster. [Bull. Biol. Fr. Belg.] 85: 392–418, 1951. **Proctor, N. K.**—The effects of various cations on insect muscle. [Physiol. Zool.] 25: 28–33. **Ramsey, J. M.**—A case of myiasis by Musca domestica in a laboratory assistant. [58]

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